WE CLAIM:

1. A method for controlling a vehicular drive line system including a fuel-controlled engine having an output member, a multiple-speed change-gear transmission having an input shaft drivingly coupled to said output member by a master friction clutch, a clutch operator for selectively engaging and disengaging said clutch to provide a selected torque transfer capacity from said output member to said input shaft, an operator-set throttle device for manual requesting of fuel supply to said engine, an engine controller for controlling fueling of said engine, said engine controller effective to fuel said engine to cause said engine to rotate at a selected engine speed and to develop a selected torque, a system controller for receiving input signals including signals indicative of (i) displacement of said throttle device and (ii) speed of said vehicle, and for processing same according to logic rules to issue command output signals to system actuators including said clutch operator and said engine controller, said method characterized by:

(1) selecting an idle drive torque value;

(2) comparing throttle device displacement to a first reference value and vehicle speed to a second reference value; and

(3) if throttle device displacement is no greater than said first reference value and vehicle speed is less than said second reference value, (i) causing said engine to rotate at a selected speed and to develop said idle drive torque at the output member thereof and (ii) causing said clutch to be engaged to have a torque transfer capacity equal to said idle drive torque.

2. The method of claim 1 wherein said idle drive torque value is selected to be sufficient to move the vehicle on level ground if the vehicle brakes are not applied, but not sufficient to move the vehicle on level ground if the vehicle brakes are applied.

3. The method of claim 1 wherein said idle drive torque is less than ten percent (10%) of the rated input torque of the transmission.

4. The method of claim 1 wherein said transmission has a rated input torque value in the range of 400 to 600 pound-feet and said idle drive torque is in the range of 20 to 40 pound-feet.

5. The method of claim 1 wherein step (3) additionally requires that said transmission be engaged in a starting gear.

6. The method of claim 1 wherein said transmission is a mechanical transmission utilizing positive jaw clutches.

7. The method of claim 1 wherein said clutch is a liquid-cooled wet clutch.

8. The method of claim 2 wherein said clutch is a liquid cooled wet clutch.

9. The method of claim 5 wherein said clutch is a liquid cooled wet clutch.

10. The method of claim 1 wherein step (3) additionally requires that said transmission be engaged in one of a low speed ratio and a reverse ratio.

11. The method of claim 1 wherein said system controller is microprocessor-based and said engine controller communicates with an electronic data link conforming to the protocols of one of SAE J1922, SAE J1939 and/or ISO 11898.

12. The method of claim 1 wherein said first reference value equals about zero throttle displacement.

13. The method of claim 1 wherein said second reference value equals about 3 MPH (about 5 KPH).

14. The method of claim 1 wherein said selected speed is the preselected idle speed of said engine.

15. The method of claim 1 wherein said engine controller ~~may be~~ will be commanded to cause said engine to generate a gross engine torque (T_{EG}), torque at the engine output (T_{FW}) is equal to gross engine torque minus parasitic engine torque ($T_{FW} = T_{EG} - T_P$), and parasitic engine torque at a given engine speed is determined by a lookup table which uses the information of engine friction torque (via SAE J1939) as an input to the table.

16. A method for controlling a vehicle master friction clutch (14) drivingly connecting a fuel-controlled engine (12) to a transmission input shaft (20), said method comprising:

sensing (i) operation of an operator throttle position device (33) and (ii) vehicle speed (OS);

selecting an idle drive torque value (T_{ID}) such that the amount of torque applied to the transmission input shaft is sufficient to launch the vehicle if the transmission is in low gear and the vehicle brakes are not applied but is insufficient to launch the vehicle of the vehicle brakes are fully applied; and

if the operator throttle position is less than a throttle reference value and vehicle speed is less than a speed refrerence value, causing the vehicle master friction clutch to be engaged to a torque transfer capacity substantially equal to said idle drive torque value.

~~17~~ 16. A vehicular drive line system including a fuel-controlled engine having an output member, a multiple-speed, change-gear transmission having an input shaft drivingly coupled to said output member by a master friction clutch, a clutch operator for selectively engaging and disengaging said clutch to provide a selected torque transfer capacity from said output member to said input shaft, an operator-set throttle device for manual requesting of fuel supply to said engine, an engine controller for controlling fueling of said engine, said controller effective to fuel said engine to cause said engine to rotate at a

selected engine speed and to develop a selected torque, a system controller for receiving input signals including signals indicative of (i) displacement of said throttle device and (ii) speed of said vehicle, and for processing same according to logic rules to issue command output signals to system actuators including said clutch operator and said engine controller, said system characterized by said logic rules including rules for:

(1) storing a preselected an idle drive torque value;

(2) comparing throttle device displacement to a first reference value and vehicle speed to a second reference value; and

(3) if throttle device displacement is no greater than said first reference value and vehicle speed is less than said second reference value, (i) causing said engine to rotate at a selected speed and to develop said idle drive torque at the output member thereof and (ii) causing said clutch to be engaged to have a torque transfer capacity equal to said idle drive torque.

18. The system of claim 17 wherein said idle drive torque value is selected to be sufficient to move the vehicle on level ground if the vehicle brakes are not applied, but not sufficient to move the vehicle on level ground if the vehicle brakes are applied.

19. The system of claim 17 wherein said idle drive torque is less than ten percent (10%) of the rated input torque of the transmission.

20. The system of claim 17 wherein said transmission has a rated input torque in the range of 400 to 600 pound-feet and said idle drive torque is in the range of 20 to 40 pound-feet.

21. The system of claim 18 wherein the logic rule (3) additionally requires that said transmission be engaged in a starting gear.

22. The system of claim 17 wherein said transmission is a mechanical transmission utilizing positive jaw clutches.

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23. The system of claim 17 wherein said clutch is a liquid-cooled wet clutch.

24. The system of claim 17 wherein said system controller is microprocessor-based and said engine controller communicates with an electronic data link conforming to the protocols of one of SAE J1922, SAE J1939 or ISO 11898.

25. The system of claim 17 wherein said first reference value equals about zero throttle displacement.

26. The system of claim 17 wherein said second reference value equals about 3 MPH.

27. The system of claim 17 wherein said selected speed is the preselected idle speed of said engine.